REMARKS

This paper is submitted in response to the final Office Action mailed May 12, 2008. With this Amendment, claims 1, 16 and 17 are amended. Claims 8, 10-14, 20 and 21 are hereby canceled. Accordingly, the claims currently pending before the Examiner for consideration are claims 1-7, 16-19 and 22.

The specification was objected to because it contained an embedded hyperlink or other form of browser-executable code. As required by the Office Action, this issue has been corrected at paragraph [0035]. Moreover, the Applicant has corrected other typographical and grammatical errors.

At paragraph 7 of the Office Action, claims 1, 10 and 21 were rejected under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement. The Applicant respectfully submits that the claimed subject matter is fully enabled to one of ordinary skill in the art. As indicated in the Office Action, the Brown et al. reference discloses "the alignment between a string of words and individual words." As explained in paragraph [0039] of the present application, "because the alignment algorithm in 210 is identical with that used in a statistical machine translation system, no additional core alignment code is necessary if such a system is already available; the only modification needed is to require that the input take the form of sequences of characters rather than sequences of words." (emphasis added). Since alignment systems for strings of words are well-known and the Applicant has clearly taught how to use such systems as applied to character alignment, the Applicant respectfully submits that with this teaching, one of skill in the art could easily practice the claimed invention without undue experimentation. Accordingly, the Applicant respectfully requests withdrawal of the rejection of independent claim 1 and its dependent claims 2-7 and 22 under 35 USC § 112, first paragraph. Claims 10 and 21 are hereby canceled.

At paragraph 10 of the Office Action, claims 17 and 21 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office Action stated that "[i]t is unclear as to what the applicant means by the term exclusively." Accordingly,

that term has been deleted from claim 17. Claim 21 has been canceled. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 17 under 35 USC § 112, second paragraph.

At paragraph 12 of the Office Action, claim 1 was rejected under 35 USC § 102(a) as being anticipated by Lee et al., "Acquisition of English-Chinese Transliterated Word Pairs from Parallel-Aligned Texts Using a Statistical Machine Transliteration Model." Independent claim 1 has been amended to clarify that it is not just the step of using statistical textual alignment that is performed without pronunciation information, but rather that the entire "method of training the transliteration processing system does not use pronunciation information."

The method recited by amended claims 1 and 16 provides several advantages as discussed at paragraph [0038] of the present application, which is provided below for convenience:

> This offers several advantages. For example, it permits the system to be used between language pairs for which phonological data may not exist, or when phonological information is not available, for example, Arabic or Chinese names when encountered in Japanese, but which need to be identified in English. Furthermore, because alignment system 210 uses standard machine translation techniques, the direction of mapping is completely and immediately reversable, allowing the relationship between the languages to be reversed with the same training data. A further advantage of the machine translation modeling over simple character correspondence of word pairs or phonological models is the ability to map characters to null characters; among other things, this permits the system to be relatively robust when confronted with noisy morphological variation between the two languages as might be encountered when data is extracted from parallel texts. For example, given a Japanese *katakana* form "...." that can be directly transliterated under one conventional transliteration scheme as "ma-ne-e-ji", the alignment system 210 can learn that these characters map to the English word "managed" in certain contexts, e.g., English "managed code", despite the additional "-ed" which lacks any counterpart in the Japanese; likewise, the system is able to learn the relevant alignments between the characters in the Japanese word "......., directly transliterated under one conventional transliteration scheme as "i-n-su-to-o-ru" and English "installation". FIG. 4A pictorially illustrates the alignments for this latter word pair, learned under one embodiment of the system. In this example, several characters in the English word, namely those in the final

character sequence "a-t-i-o-n-$", are aligned to the Japanese end-token "$", allowing this English sequence to be potentially available to a cognate word identification system such as that in 211, albeit with a lower likelihood. This robustness, inherited from statistical machine translation, permits alignment system 210 to learn contextual mappings directly from ordinary parallel text data, something that phonological systems cannot do.

Unlike the method recited by claim 1, Lee et al. specifically teach that pronunciation information is used. At page 97, left hand column, lines 19-21 Lee et al. specifically state "[o]ne feasible solution is to adopt a Chinese romanization system to represent the pronunciation of each Chinese character." (Emphasis added) This conversion is apparently necessary because at page 98, right-hand column, lines 18-30 Lee et al. specifically teach restricting alignment to limited patterns:

> To accelerate the convergence of EM training and reduce the noisy TU aligned pairs (U_i, v_j), we restrict the combination of TU pairs to limited patterns. Consonant TU pairs only with same or similar phonemes are allowed to be matched together. An English consonant is also allowed to match with a Chinese syllable beginning with same or similar phonemes. An English semi-vowel TU can either be matched with a Chinese consonant or a vowel with same or similar phonemes, or be matched with a Chinese syllable beginning with same or similar phonemes.

Because Lee et al. specifically teach away from the invention recited by amended claim 1, Applicant respectfully submits that Lee et al. do not teach, suggest or render obvious the method of claim 1. Withdrawal of the rejection is respectfully requested. Claims 2-7 and 22 depend from claim 1 and also recite the discussed feature. These claims are believed to be separately patentable when their recited features are combined with the features of independent claim 1. Claims 8 and 10-14 are hereby canceled.

At paragraph 14 of the Office Action, claims 16-22 were rejected under 35 USC § 103(a) as being unpatentable over Lee in view of Kang et al., "Automatic Transliteration and Back-Transliteration by Decision Tree Learning." Independent claim 16 has been amended to recite that "the method of training the transliteration processing system does not use pronunciation information." In stark contrast, Kang clearly uses pronunciation information in training and coding its system: "Table 1 lists phonetically similar Korean transliterations (or

characters) for several English alphabets. This simple bilingual phonemic knowledge can be coded without much effort by even non-expert." (page 3, right column, second paragraph). As discussed above with respect to claim 1, Lee also teaches the use of pronunciation information for training a transliteration processing system. Because both Lee and Kang teach the use of pronunciation information, even their combination does not render obvious a method that does not use such pronunciation information.

Accordingly, the Applicant respectfully submits that the combination of Lee and Kang does not render obvious the subject matter of independent claim 16. Claims 17-19 depend from claim 16. The Applicant respectfully submits that each of these claims is separately patentable when its recited features are combined with the features of claim 16 and any intervening claim. Thus, the Applicant respectfully requests withdrawal of the rejection of claims 16-19 under 35 USC § 103(a). Claim 21 is hereby canceled. The Applicant respectfully submits that claim 22, which is dependent from claim 1, is also patentable for the reasons cited above.

In view of the foregoing, Applicants respectfully request reconsideration of the application as amended. Favorable action upon on all claims is solicited.

The foregoing remarks are intended to assist the Office in examining the application and in the course of explanation may employ shortened or more specific or variant descriptions of some of the claim language. Such descriptions are not intended to limit the scope of the claims; the actual claim language should be considered in each case. Furthermore, the remarks are not to be considered exhaustive of the facets of the invention which are rendered patentable, being only examples of certain advantageous features and differences, which applicant's attorney chooses to mention at this time. For the foregoing reasons, applicant reserves the right to submit additional evidence showing the distinction between applicant's invention to be unobvious in view of the prior art.

Furthermore, in commenting on the references and in order to facilitate a better understanding of the differences that are expressed in the claims, certain details of distinction between the same and the present invention have been mentioned, even though such differences

do not appear in all of the claims. It is not intended by mentioning any such unclaimed distinctions to create any implied limitations in the claims.

An extension of time is hereby requested for responding to the Office Action. An online charge authorization for the extension of time fee is included herewith.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By:_____
Steven M. Koehler, Reg. No. 36,188
900 Second Avenue South, Suite 1400
Minneapolis, Minnesota 55402
Phone: (612) 334-3222 Fax: (612) 334-3312

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